

Amendment to the Claims

Please amend Claim 14, and add new Claims 18-20 to read as follows.

Claims 1-10. (Cancelled)

11. (Previously Presented) An exposure apparatus comprising:  
a projection optical system of a catadioptric type; and  
an optical element disposed on a reciprocating light path of said projection optical system, said optical element being movable to change aberration of said projection optical system to be produced due to exposure.
12. (Previously Presented) An apparatus according to claim 11, wherein the aberration includes at least one of spherical aberration, astigmatism and curvature of field.
13. (Previously Presented) An apparatus according to claim 11, wherein the aberration is produced as a result of at least one of a pressure, heat and an illumination condition.
14. (Currently Amended) An exposure apparatus comprising:  
a projection optical system of a catadioptric type, said projection optical system including (i) a first mirror for reflecting light from a light source thereby to define a

reciprocating light path, and (ii) a second mirror disposed at a position not intercepting a path of the light from the light source to the first mirror, for directing light from the first mirror along a one-way light path off the reciprocating light path; and

an optical element disposed on the reciprocating light path of said projection optical system, said optical element being movable to change aberration of said projection optical ~~system to be produced due to exposure~~ system.

15. (Previously Presented) An apparatus according to claim 14, wherein the aberration includes at least one of spherical aberration, astigmatism and curvature of field.

16. (Previously Presented) An exposure apparatus comprising:  
a projection optical system of a catadioptric type;  
an optical element disposed on a reciprocating light path of said projection optical system; and  
an actuator for actuating said optical element to change aberration of said projection optical system.

17. (Previously Presented) An apparatus according to claim 16, wherein the aberration includes at least one of spherical aberration, astigmatism and curvature of field.

18. (New) An exposure apparatus comprising:

a projection optical system of a catadioptric type, said projection optical system including an optical element disposed on a reciprocating light path of said projection optical system at a position where a light passing region of the light traveling along a forward light path and a light passing region of the light traveling along a backward light path are overlapped with each other, said optical element being movable along an optical axis direction.

19. (New) An apparatus according to claim 18, wherein said optical

element is movable to change aberration of said projection optical system.

20. (New) An apparatus according to claim 19, wherein the aberration

includes at least one of spherical aberration, astigmatism and curvature of field.